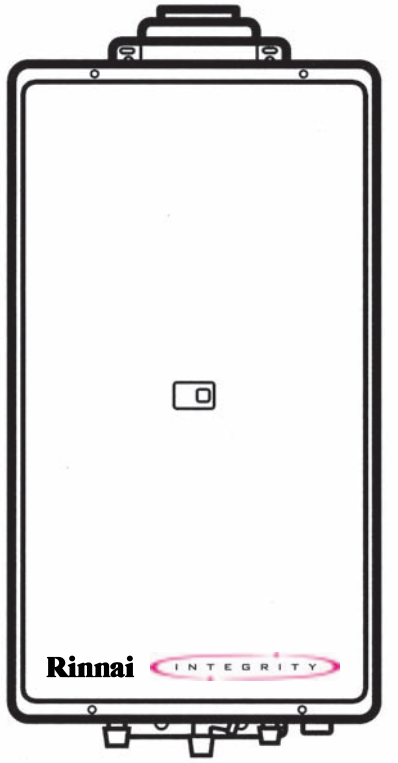
INTEGRITY

How to use your New Continuous Flow Water Heater

Model V2532FFUC

(*Residential/Commercial indoor unit)*



DESIGN CERTIFIED ®

CERTIFIED ®

ANS Z21.10.3 • CSA 4.3

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WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**
- **WHAT TO DO IF YOU SMELL GAS**
  - **Do not try to light any appliance.**
  - **Do not touch any electrical switch; do not use any phone in your building.**
  - **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
  - **If you cannot reach your gas supplier, call the fire department.**
- **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

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S P E C I F I C A T I O N S

Type of appliance	Temperature controlled continuous flow gas hot water system
Operation	With / without remote controls
Exhaust system	Direct Vent - Forced combustion
Rinnai model number	REU-V2532FFUC-US
Maximum/Minimum gas rate (Input BTU's)	180,000 BTU's - 15,000 BTU's Natural Gas 180,000 BTU's - 15,000 BTU's Propane Gas
Hot water capacity, (50°F rise)	0.5 to 6.5 GPM
Maximum hot water capacity, (35°F rise)	8.4 GPM
Setpoint Temperature (without remote)	Factory setting - 140°F
Temperature range (with remote)	MCC controller : 96 - 180°F
Approved gas type	Natural or Propane - Ensure unit matches gas type it's being installed on.
Installation	Indoor Only
Dimensions	Height 23 5/8" Width 13 25/32" Depth 8 13/16"
Weight	49 Lbs.
Efficiency rating	87%
Noise level	49 dB (A)
Connections	Gas supply 3/4" MNPT Cold water inlet 3/4" MNPT Hot water outlet 3/4" MNPT
Ignition system	Direct electronic ignition
Electrical consumption	Normal 75 watts Standby 5.5 watts Anti-frost protection 100 watts
Water temperature control	Simulation feedforward and feedback.
Water flow control	Water flow sensor, electronic water control device, and electronic by-pass control device
Recommended Minimum water supply pressure	20 PSI (Rinnai recommends 50-80 PSI for maximum performance)
Maximum water supply pressure	150 PSI

INTEGRITY

S P E C I F I C A T I O N S

Safety devices	Appliance - AC 120 Volts - 60Hz. Remote control DC 12 Volts (Digital)	
	Flame failure - Flame rod	
	Boiling protection - 203˚F	
	Remaining flame (OHS) 194˚F bi-metal switch	
	Thermal fuse 264˚F	
	Automatic frost protection - Bi metal sensor & anti-frost heaters	
	Combustion fan rpm check - Integrated circuit	
	Over current - Glass fuse (3 amp)	
	If remote fails or becomes disconnected unit defaults to 100˚F with water flowing, this is an anti-scald feature.	
Remote control	MCC-45-4 US Main control	
Remote control cable	Non-polarized two core cable	
Clearances from combustibles	Top of heater 6"	
	Front of heater 6"	
	Sides of heater 2"	
	Back of heater 0"	
	Floor 12"	
	Vent/Air Intake 0"	
Minimum and Maximum gas supply pressure	Natural Gas : *Minimum 6" W. C. (NAT.) **Maximum 10.5" W. C.	Propane Gas: *Minimum 10" W. C. (LPG) **Maximum 13.5" W. C.
Manifold Gas Pressure	Natural Gas 3.7" W. C. high fire 0.77" W. C. low fire LPG: 4.2" W. C. high fire 0.93" W. C. low fire	
Warranty	Five years heat exchanger / five years parts (see unit's warranty for details)	

*Minimum input pressure is for the purpose of input adjustments.
**Do not exceed maximum pressure.

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L I M I T E D W A R R A N T Y

Rinnai Integrity Water Heater Models: REU-V2532FFU(C) and REU-V2532W(C)

WHAT IS COVERED?

This Warranty covers any defects in materials or workmanship, subject to the terms stated below. This Warranty applies only to productsthat are installed by a state qualified or licensed contractor. This Warranty is void if the installer has not atttended a Rinnai product knowledge class before installing this water heater. This Warranty extends to the originalpurchaser and subsequent transferees, but only while the product remains at the site of the original installation. This Warranty only extendsthrough the first installation of the product and terminates if the product is moved or reinstalled at a new location.

HOW LONG DOES COVERAGE LAST?

Item	Period of Coverage
Heat Exchanger	*5 Years from Date of Purchase**
All other Parts and Components	*5 Years from Date of Purchase*

WHAT WILL RINNAI DO?

Rinnai will repair or replace the product or any part or component that is defective in materials or workmanship*, except as set forth as follows. Rinnai will pay reasonable shipping costs, provided you obtain prior authorization from an Authorized Rinnai Distributor. Rinnai will not pay labor charges associated with the repair or replacement of the product or any part or component. All repair parts must be genuine Rinnai parts. All repairs or replacements must be performed by an individual or servicing company that has been authorized by Rinnai or its distributor.

Replacement of the product or replacement of the heat exchanger may be authorized by Rinnai only. Rinnai does not authorize any person or company to assume for it any obligation or liability in connection with the replacement of a product or heat exchanger. If Rinnai determines that repair of a product is not possible, Rinnai will replace the product with a comparable product, at Rinnai's discretion.

* If the Heat Exchanger fails due to defect in material or workmanship within the fourth (4) or fifth (5) year from date of purchase, Rinnai will make the following allowances toward the purchase of replacement heat exchanger:

Year of Failure	Allowance
4	50%
5	25%

HOW DO I GET SERVICE?

You must contact an Authorized Distributor or Installer for the repair of a defective product under this Warranty. Failure to contact an Authorized Distributor or Installer will void the Warranty. For the name of the Authorized Distributor or Installer nearest you, please contact your local HVAC dealer or gas service technician, visit the Rinnai website (www.rinnai.us), call Rinnai at1-800-621-9419 or write to Rinnai, 103 International Drive, Peachtree City, Georgia 30269.

Proof of purchase is required. You can show proof of purchase with a dated sales receipt, or by completing and mailing the enclosed Warranty registration card within 30 days of purchasing the product. **Please complete the enclosed Warranty registration card and mail it to Rinnai at the address shown on the card.** Receipt of this card by Rinnai will constitute proof-of-purchase for this product. However, return of this Warranty registration card is not necessary in order to validate this Warranty.

WHAT IS NOT COVERED?

This Warranty does not cover any failures or operating difficulties due to accident, abuse, misuse, alteration, misapplication, force majeure, improper installation, improper maintenance or service, water quality, scale buildup, or for any other causes other than defects in materials or workmanship. This warranty does not apply to any product whose serial number or manufacture date has been defaced. This Warranty does not cover any product when used as a pool or spa heater.

This Warranty does not apply if the water supply to the water heater does not meet the National Secondary Drinking Water Regulations, as set forth in the U.S. Code of Federal Regulations, 40 CFR, Chapter 1, Part 143.

Rinnai is not liable for any special, incidental, indirect or consequential damages that may arise, including damage to person or property, loss of use, or inconvenience. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

LIMITATION ON IMPLIED WARRANTIES

Any implied warranties of merchantability and fitness arising under state law are limited in duration to the period of coverage provided by this limited Warranty, unless the period provided by state law is less. Some states do not allow limitations on how long an implied Warranty lasts, so the above limitation may not apply to you.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

INTEGRITY

C O N T E N T S

Specifications 2,3

Warranty 4

Owner's Installation Information 6

Features of your new Integrity 7

Safety Issues 8

Basic Operation 9

About Hot Water 10

Scalds-First Aid 10

Remote Control Operation 11

Error Messages 12

Maintenance & Service Information 13,14

Trouble Shooting and Common Questions 15

For Your Safety Read Before Operating..... 16

Operating Instructions 16,17

Care & Lime Condition Warning 17

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OWNER'S INSTALLATION INFORMATION

IMPORTANT!

All Rinnai water heaters MUST be installed by a state qualified or licensed contractor. Failure to comply with your local and state codes pertaining to water heater installations will void the warranty on said water heater(s). It is the responsibility of the person having the unit installed to ensure the contractor has the proper licences and permits for his state. In addition to the above, Rinnai requires all contractors attend a product knowledge class before installing our water heaters. This requirement MUST be met in order for your product's warranty to be valid. Failure to comply with your local and state codes will result in non-compliance and void the warranty of the product being installed.

This appliance must be installed in accordance with local codes, or in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1 and/or the CAN/CGA-B149, Installation Codes.

Install this product indoors, DO NOT install outdoors.

Do Not use this appliance if any part has been underwater. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been underwater.

Detailed instructions on the proper installation practices to follow for the installation of your new continuous hot water heater are included at the back of this manual.

FEATURES OF YOUR NEW CONTINUUM

- The Integrity V2532FFUC is one of the most advanced water heaters available. It produces hot water continuously at the temperature preset in the unit or at the temperature set on the remote temperature controller. Installation of the remote temperature controller is recommended for optimum performance.

- The Integrity V2532FFUC never runs out of hot water. While electricity, water and gas supplies are connected, the Integrity V2532FFUC will produce hot water whenever the water flow rate through the unit exceeds 0.6 gpm and the temperature rise through the unit exceeds 45°F.

- The gas burner lights automatically when the hot water tap is opened, and goes out when the tap is closed. Ignition is electronic, there is no pilot light. When the hot water tap is off, no gas is used. You save energy and money with the Integrity V2532FFUC.

- The temperature of the outgoing hot water is constantly monitored by a built in sensor. If the temperature of the outgoing water rises to more than 6 degrees above the selected temperature (shown on the optional digital remote control) the gas burner will automatically go out. The gas burner will re-ignite once the outgoing hot water temperature falls below the selected temperature.

- With the MCC-45-4US remote control installed the water temperature is adjustable from 96 to 180°F. **The water temperature cannot be set to a temperature other than 140°F without the use of the MCC-45-4US remote control unit.** If you require a temperature other than 140°F you must install the MCC-45-4US remote control unit.

- Error messages are displayed on the remote control units, simplifying service calls.

- The Integrity V2532FFUC incorporates a device to limit the temperature fluctuations (cold water sandwich effect) when the water is rapidly turned off, then on again. To eliminate the cold water sandwich effect completely, the Integrity V2532FFUC can be installed with a circulation loop, with a small storage tank, as shown on page 24.

- The sound (noise) level from the Integrity V2532FFUC is very low.

- The Integrity V2532FFUC is a very compact power vented device. It saves valuable floor and wall space.

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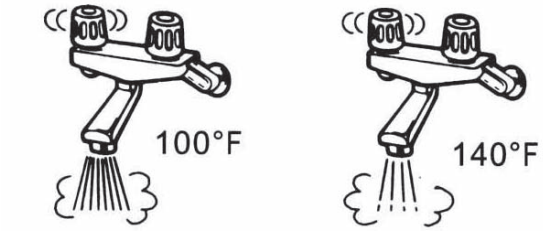
S A F E T Y I S S U E S

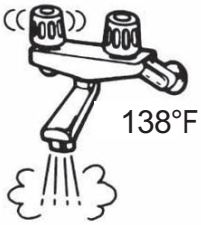
Always check water temperature by hand before entering the shower or bath. The temperature may have been changed.

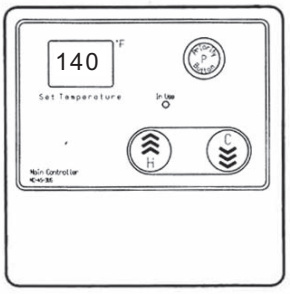
The Integrity V2532C controls the water temperature automatically. To do this it sometimes needs to change the water flow accordingly. The water flow from the hot water tap may vary after the selected temperature at the Remote Control is altered. The water flow may also vary from summer to winter, as incoming water temperatures differ.



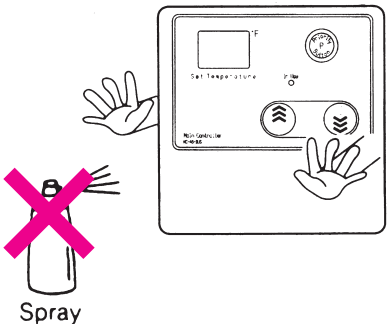
The water temperature can only be adjusted between 96°F and 110°F when the hot water tap is open, and hot water is flowing.

Depending on the weather conditions and the length of the pipe between the Integrity V2532C and the tap in use, there may be a variation between the temperatures displayed at the Remote Control and the temperature of the water at the tap.

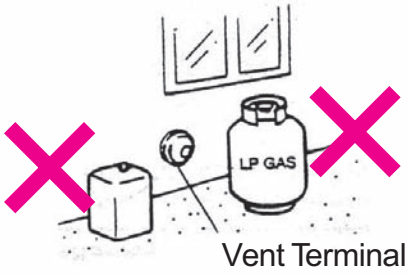




Do not clean Remote Controls with solvents. Use a soft damp cloth.



The vent/air intake should be positioned away from flammable materials, trees, shrubs, etc.



Do not connect vent to natural draft vents or fireplaces, this unit can only be used with an approved Rinnai/Ubbink vent kit and components. Do not vent unit into other rooms. Vent terminal must be outside.

BASIC OPERATION

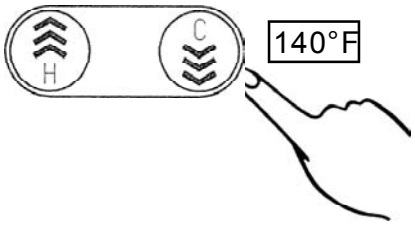
1 Adjusting Temperature

The setpoint temperature of the Integrity V2532(C) can only be adjusted by the user using the Remote Control. To adjust the setpoint temperature of the Integrity V2532(C), all hot water taps must be closed, and all circulating pumps turned off.

NOTE

TEMPERATURE CANNOT BE ADJUSTED WHEN ANY HOT WATER TAP IS OPEN, OR WATER IS FLOWING THROUGH THE WATER HEATER.

Simply press the H or C button until the required temperature is displayed on the Digital Monitor.

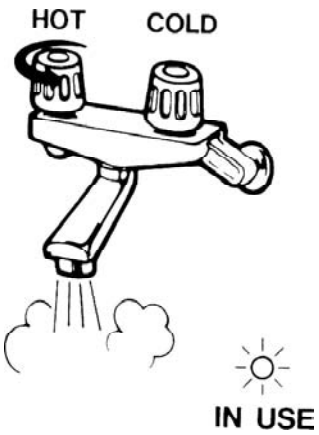


The Remote Control will display the water heaters current setpoint temperature. There is a hot water scald potential if the thermostat is set to high.

NOTE

CHECK LOCAL CODES FOR THE MAXIMUM WATER TEMPERATURE SETTING ALLOWED WHEN USED IN NURSING HOMES, SCHOOLS, DAY CARE CENTERS, AND ALL OTHER PUBLIC USE APPLICATIONS.
Rinnai recommends fixing the water heater setpoint temperature at 108°F for ALL public use applications.

2



To operate the Integrity V2532(C) simply turn any hot water tap on, or initiate water flow through the unit with a circulating pump. This will automatically light the burner providing hot water at the preset temperature. If the remote control has been installed, the green IN USE indicator will glow on the remote control.

Note: The Rinnai water heater will not provide hot water instantly at the hot water fixtures. Any cold water existing in the hot water lines must be purged first.

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A B O U T H O T W A T E R

Hot Water Is Dangerous, especially for the young and the elderly or the infirm. The Integrity V2532C allows you to precisely control the temperature of your hot water, ensuring safe hot water temperatures.

Water Temperatures over 125°F can cause severe burns instantly or death from scalds.

Hot Water can cause first degree burns with exposure for as little as:

3	seconds at 140 °F
20	seconds at 130 °F
8	minutes at 120 °F

Test the temperature of the water with your elbow before placing a child in the bath or shower.

Do not leave a child or an infirm person in the bath unsupervised.

S c a l d s - F i r s t A i d

1) Remove clothing; Remove all wet clothing, quickly. Wet clothing retains the heat.

2) Apply cold water for 30 minutes; Immediately submerge the burnt area in cold water for 30 minutes to reduce the heat in the skin, preventing deeper burning. *Never use butter, oils or ointment to cover the burn.* They may retain the heat.

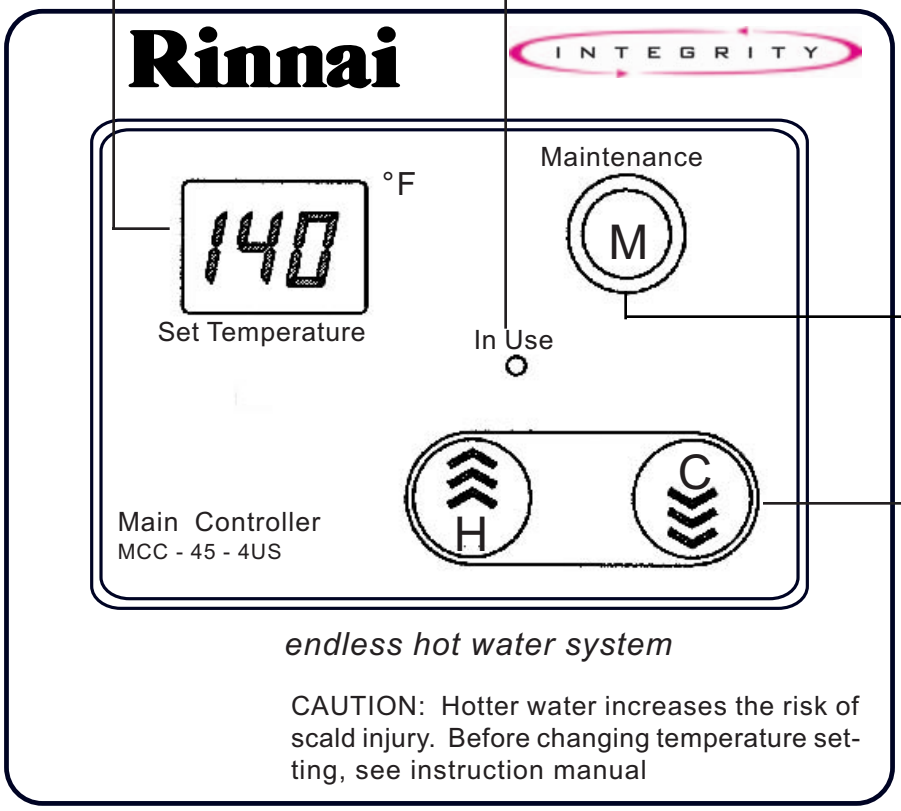
3) Keep the scalded person warm; Place a blanket around the person.

4) Seek Medical Advice; Call your medical advice hotline and describe the scald, follow their directions.

REMOTE CONTROL OPERATION

Digital Monitor
Indicates the selected water temperature. Error messages flash in the event of a failure.

In Use Indicator
Indicates that a hot water tap is open. (The setpoint temperature cannot be adjusted when indicator is illuminated.)



Maintenance Button
Pressing repeatedly shows sequence of error codes water heater has experienced.

Thermostat
Increase or decrease the desired water temperature.

When the Main Controller MCC-45-4US is used in public use applications, it should be installed where it can not be adjusted by the public (i.e. a maintenance room or manager's office.

DIAGNOSTIC USE OF REMOTE CONTROL

1. **To Display Error Codes** -- Press Maintenance Button, "M". To sequence through stored error codes, press "M" followed by the "H" thermostat button.
2. **To Display Water Flow through water heater** -- Press "H" thermostat button, hold for 2 seconds and simultaneously press "M" button.
3. **To Display Outlet Water Temperature** -- Press "C" thermostat button, hold for 2 seconds and simultaneously press "M" button.

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E R R O R M E S S A G E S

The Integrity V2532C has the ability to check its own operation continuously. If a fault occurs, an Error Message will flash on the Digital Monitor of the Remote Controls. This assists with diagnosing the fault, and may enable you to overcome a problem without a service call. Please quote the code displayed when inquiring about service.

NOTE: Failure to remedy faults may result in severe burns, scalds, and/or death.

Code Displayed	Fault	Remedy
10	Air Supply or Exhaust Blockage	Check that nothing is blocking the air intake or exhaust.
11	No Ignition	Check that the gas is turned on at the water heater, gas meter or cylinder.
12	Flame Failure Earthing Failure	Check that the gas is turned on at the water heater and gas meter. Check for obstructions in flue outlet.
14	Thermal Fuse	Service Call
16	Over Temperature Warning	Service Call
32	Outgoing Water Temperature Sensor Faulty	Service Call
33	Heat Exchanger Outgoing Water Temperature Sensor Faulty	Service Call
34	Combustion Air Temperature Sensor Faulty	Service Call
52	Mod. Solenoid Valve Answer Abnormal	Service Call
61	Combustion Fan Failure	Service Call
71	Solenoid Valve Driving Circuit Faulty	Service Call
72	Flame Sensing Device Faulty	Service Call
LC	Scale build-up in Heat Exchanger	Service Call

MAINTENANCE & SERVICE INFORMATION

Warning: Always turn off the electrical power supply, the manual gas valve and the manual water control valve whenever servicing the unit.

The Integrity V2532C should be checked by a Rinnai Certified Technician once a year. A Rinnai Certified Technician should perform any repairs that may be necessary.

The following items should be checked each inspection:

1) The area around the Integrity V2532C unit should be free from combustible materials such as cloth, vegetation and building materials. (see page 8)
2) Check burners for presence of foreign debris.
3) Remove and clean the inlet water filter.
4) Keep the appliance area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.
5) Do not obstruct flow of combustion and ventilation air.

In the case of any fault or error message from the Integrity V2532C, first turn all hot water taps off. Wait for 5 seconds. Turn the hot water tap back on. If the error message still remains, call your Rinnai Authorized Service Representative or Rinnai at 800-621-9419.

Should overheating occur or the gas supply fail to shutoff, turn off the manual gas control valve to the appliance.

DO NOT ATTEMPT TO SERVICE YOUR Integrity V2532C YOURSELF.

Call a Rinnai Authorized Service Technician or call Rinnai at 800-621-9419.

MAINTENANCE SUGGESTIONS

This water heater has been designed and constructed for a long performance life when installed and operated properly under normal conditions. Regular inspections, as outlined in this section, are strongly recommended as a means of keeping your heater operating efficiently.

1. Cleaning

The water heater must be cleaned annually.
Keep the water heater clear of dust and debris especially in and around burner.
Cleaning procedures for the Integrity are as follows:

1) Turn off and disconnect electrical power. Allow to cool for one hour.
2) Remove the Front Panel by removing screws. See parts breakdown on panels.
3) Use pressurized air to remove dust from around main burner.
4) Use soft dry cloth to wipe cabinet.

DO NOT DAMAGE OR DISTORT ANY PARTS OF HEATER.

DO NOT USE WET CLOTH OR SPRAY CLEANERS ON BURNER.

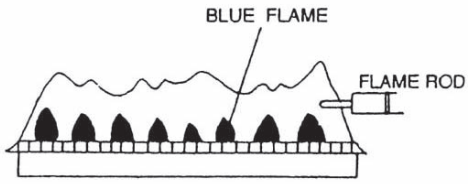
2. Visual check of main burner flames.

The burner must flame evenly over the entire surface when operating correctly. The flame must burn with a clear, blue, stable flame. See the parts breakdown of the burner for the location of view ports. Any and all parts removed for inspection or service must be replaced before operating the unit.
The flame pattern should be as shown in the following Figures.

VISUAL CHECK

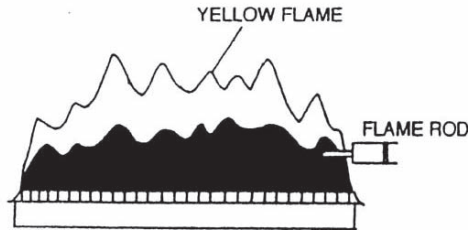
SATISFACTORY

FRONT VIEW



UNSATISFACTORY

FRONT VIEW



* VENT MAINTENANCE
* VENT SYSTEM

Must be checked annually for blockage or deterioration. See vent installation instructions.

* MAINTENANCE-ELECTRIC MOTORS

Motors are permanently lubricated and need no lubrication. Keep fan and motor free of dust and dirt, clean annually.

TROUBLE SHOOTING AND COMMON QUESTIONS

Q - *When I was using the hot water, the water got cold!*

A - If you adjusted the flow from the tap to lessen it, you may have gone below the minimum flow required. The Integrity V2532 requires 0.5 GPM to operate. If you mix the water with a tap and attempt to get a temperature well below the temperature being controlled by the unit, it may drop the flow below 0.5 GPM. Decrease the temperature supplied by the Integrity V2532 at the remote control or increase your total flow.

Q - *White smoke comes out of the exhaust!*

A - During colder weather when the exhaust temperature is hotter than the air, the exhaust fumes condense producing white steam.

Q - *When I open a hot tap. I do not immediately get hot water!*

A - Hot water must travel through your plumbing from the Integrity V2532 to the faucet. This can take up to 2 or more minutes depending upon your plumbing system. If hot water is disired instantly at the hot water fixture, a circulaton loop system must be installed. Please contact your plumber for details.

Q - *After I turn off the hot water tap, the fan on the Integrity V2532 continues to run!*

A - The fan is designed to be on for 65 seconds after the flow of water stops.This is to ensure constant water temperatures during rapid starting and stopping, as well as exhausting any residual gas flue products from the unit.

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FOR YOUR SAFETY READ BEFORE OPERATING

Warning: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance does not have a pilot. It is equipped with a direct ignition device which automatically lights the burner. Do not try to light the burner by hand.

B. BEFORE OPERATING: Smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electric switch, do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

C. U. Use only your hand to operate remote control keypad. Never use tools. If the remote keypad doesn't work, do not try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

O P E R A T I N G I N S T R U C T I O N S

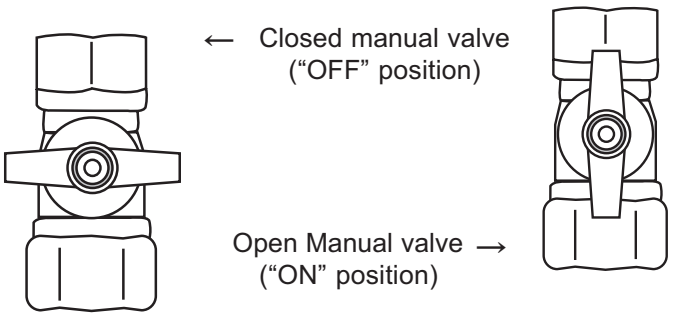
1) STOP! Read the safety information above before proceeding.

2) Set the thermostat to lowest setting.

3) Turn off all electric power to the appliance.

4) This appliance does not have a pilot. It is equipped with a direct ignition device which automatically lights the burner. Do not try to light the burner by hand.

5) Turn the manual valve located at gas inlet of the appliance clockwise ↷ to "OFF".



6) Wait (5) minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to next step.

OPERATING INSTRUCTIONS

7) Turn the manual valve located at the gas inlet of appliance counterclockwise ↶ to “ON”.

8) Turn on all electric power to the appliance.

9) Set thermostat to desired setting.

10) If the appliance will not operate, Follow the instructions “To Turn Off Gas To Appliance” and call your service technician or gas supplier.

To Turn Off Gas To Appliance

1) Set the thermostat to lowest setting.

2) Turn off all electric power to the appliance if service is to be performed.

3) Turn the manual valve at gas inlet of appliance clockwise ↷ to “OFF”

CARE & LIME CONDITION WARNING

Care of Unit’s Exterior:

Keep the exterior cabinet clean. Use a soft cloth and warm water when cleaning the cabinet. **Do Not** use volatile substances such as benzene and thinners, as they may ignite, or cause fading of the paint.

Lime Condition Warning Signal:

If you notice “LC” flashing on the remote key pad, this means the unit is beginning to lime up, and **MUST** be flushed. Contact a qualified Rinnai service technician to flush the appliance. Failure to flush the appliance when “LC” is flashing, will cause damage to the heat exchanger. Damage caused by lime build up is not covered by the unit’s warranty.

Installer's Instructions

All Rinnai water heaters MUST be installed by a state qualified or licensed contractor. Failure to comply with your local and state codes pertaining to water heater installations will void the warranty on said water heater(s). It is the responsibility of the person having the unit installed to ensure the contractor has the proper licences and permits for his state. In addition to the above, Rinnai requires all contractors attend a product knowledge class before installing our water heaters. This requirement MUST be met in order for your product's warranty to be valid. Failure to comply with your local and state codes will result in non-compliance and void the warranty of the product being installed.

Contents of Installer's Manual

Warnings 19
Performance Data 20
Locating the vent terminal 21
Dimensions 22
Recommended Piping 23,24
Venting 25,26
Gas Piping Sizing Charts 27
Gas Piping Notes 28

Pressure Relief Valve 29
Electrical Connection Notes 30
Wiring Diagram 31,32
Lighting the Unit 33
Remote Control 34,35
Testing 36
Diagnostic Points 37
Schematic Diagram 38
Exploded View ..... 39 - 42
Parts List ..... 43 - 47

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INSTALLER'S INSTALLATION INSTRUCTIONS
-Warnings-

This manual must be followed exactly.

1) Read the safety issues completely before installing the Integrity V2532C.

2) This water heater is suitable for water (potable) heating or space heating.

- The piping and components connected to the Integrity V2532C must be approved for use in potable water systems.
- Toxic chemicals such as those used for boiler water treatment are NOT to be introduced to the potable water used for space heating.
- The Integrity V2532C, if it will be used as a potable water source, it must not be connected to a system that was previously used with a nonpotable water heating appliance.

3) The Integrity V2532C is not suitable for use in pool or spa applications.

4) This unit is designed to be installed indoors using the proper vent piping to exhaust by-products of combustion to the outside environment. Contact your dealer or Rinnai for proper vent kits. **DO NOT** operate this unit without vent piping connected. Exhaust gasses must be expelled outside the home. All pipe joints shall be taped to help prevent leakage around joints. (Aluminum tape is recommended.)

5) Maintain proper space around the unit for proper servicing and operation. Minimum clearances from combustible materials are listed below.

Top of Heater	6 inches
Back of Heater	0 inch
Front of Heater	6 inches
Sides of Heater	2 inches
Floor	12 inches
Vent/Air Intake	0 inches

6) Installer must install a Pressure relief valve. Pipe pressure relief discharge to a drain or outside environment (see page 29).

7) The appliance should be located in an area where leakage of the unit or connections will not result in damage to the area adjacent to the appliance or to lower floors of the structure. When such locations cannot be avoided, it is recommended that a suitable drain pan, adequately drained, be installed under the appliance. The pan must not restrict combustion air flow.

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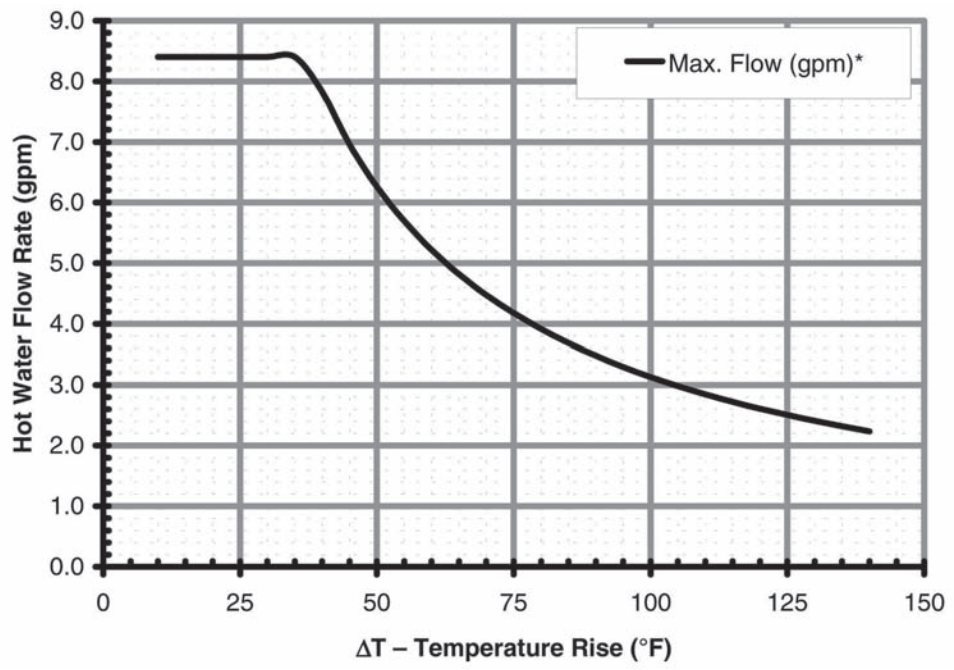
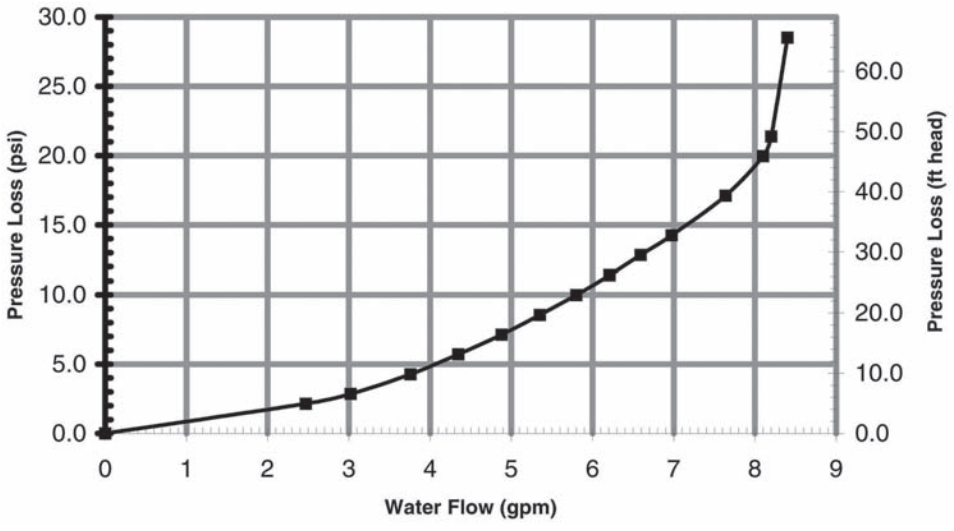
INSTALLER'S INSTALLATION INSTRUCTIONS
INTEGRITY OUTLET FLOW DATA



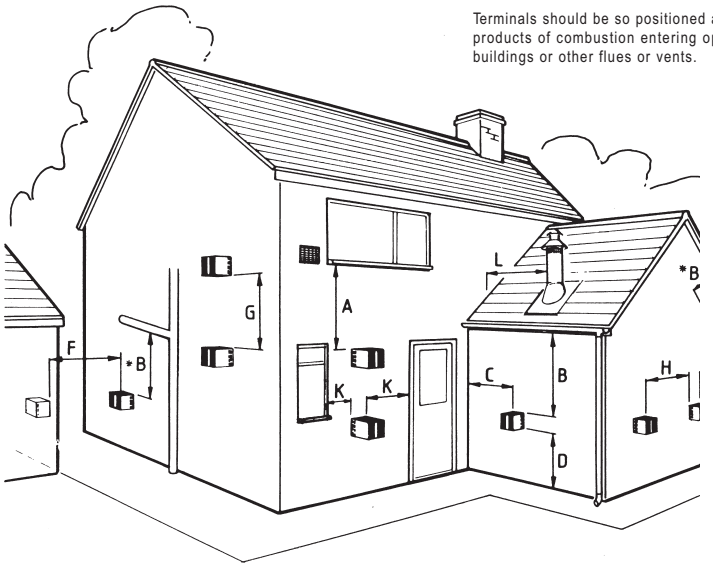
INSTALLER'S INSTALLATION INSTRUCTIONS
INTEGRITY PRESSURE DROP CURVE



INSTALLER'S INSTALLATION INSTRUCTIONS

Locating the vent terminal

RECOMMENDED VENT/AIR INTAKE TERMINAL POSITION



Vent/Air Intake Terminal positions - MINIMUM dimensions.

REF	DESCRIPTION	DISTANCE IN INCHES
A	Directly below an Opening, Air Brick or Window	12
B	Below a Gutter, Sanitary Pipework or Eaves	36
C	From any Internal Corner	12
D	Above Ground.	12
E	From an opposing wall or structure facing the Terminal	24
F	From a Terminal facing a Terminal	48
G	Vertically between Two Terminals on the same wall	60
H	Horizontally between Two Terminals on the same wall	12
J	From any External Corner	12
K	Horizontally from any Opening, Air Brick, Window or Door	12
L	Vertical Flue from wall (Flat or Pitched Roof)	24

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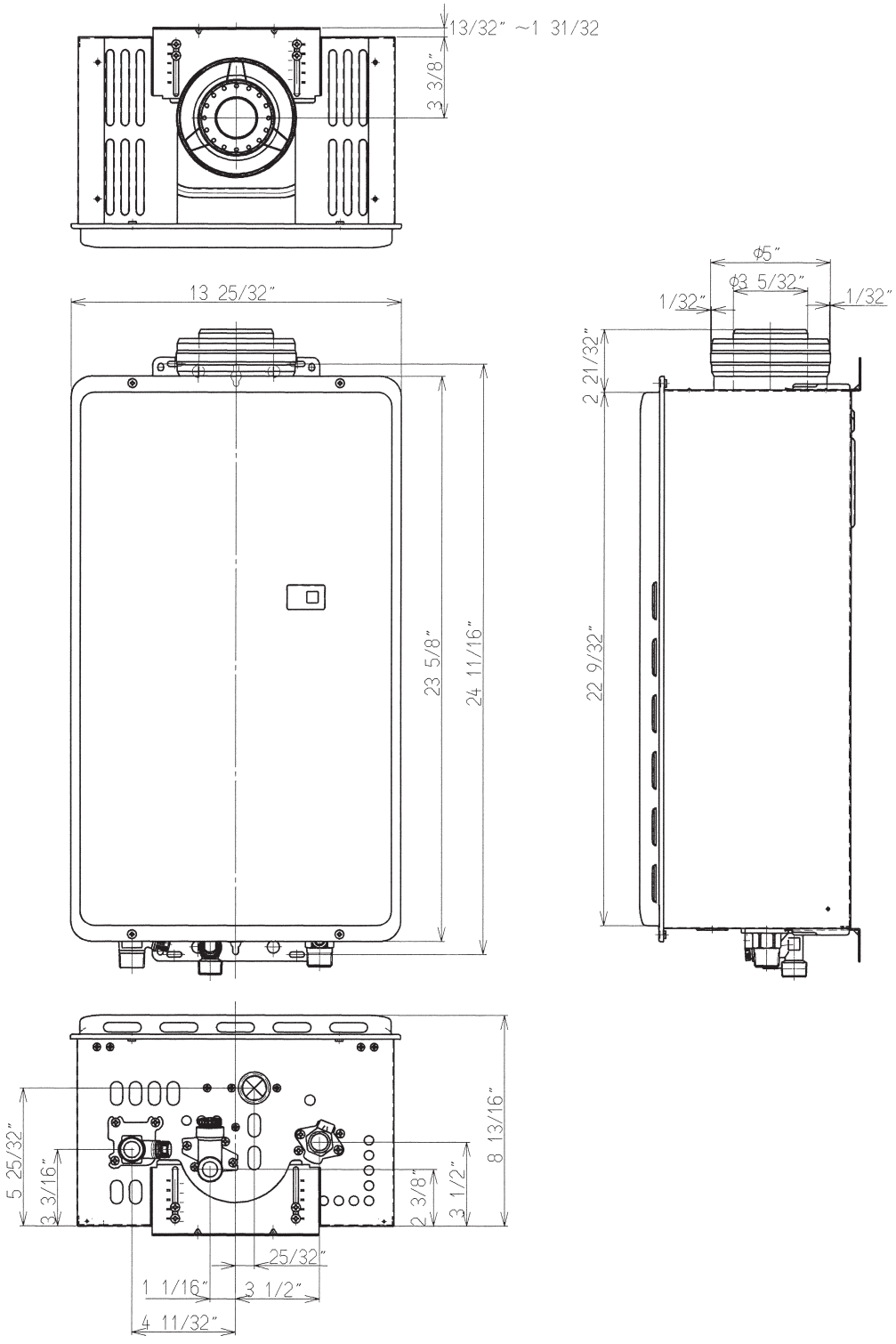
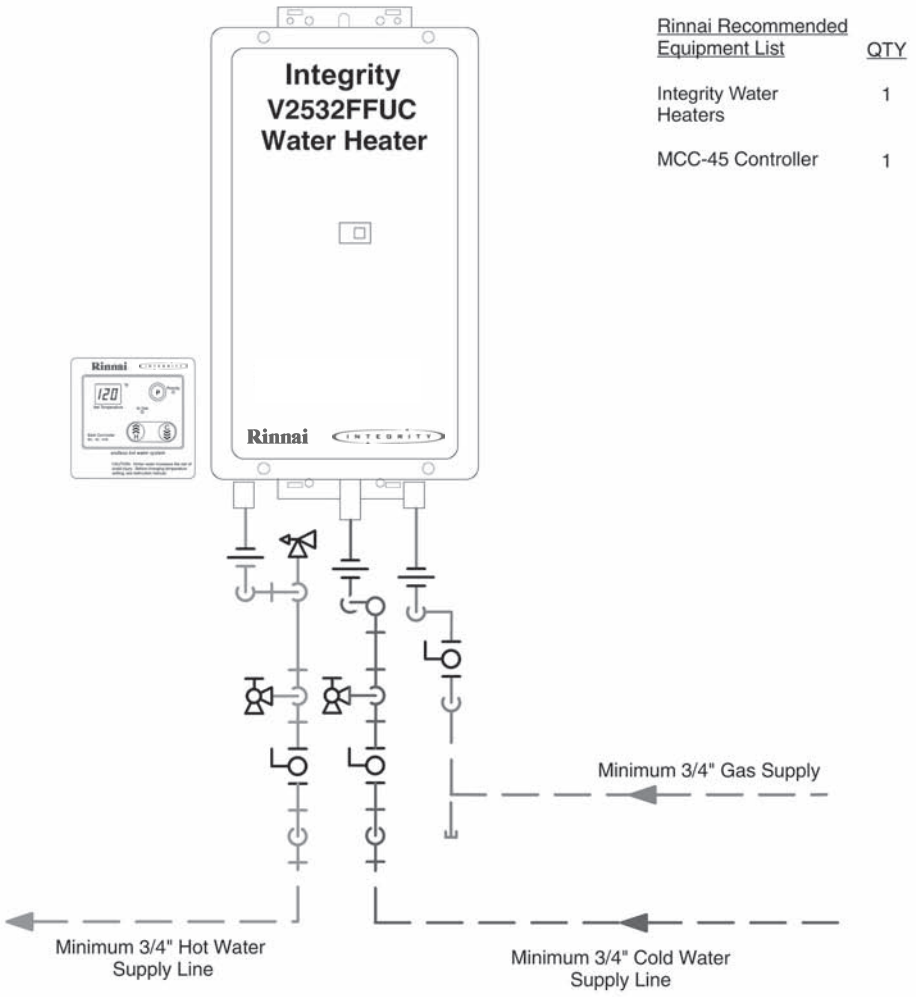
INSTALLER'S INSTALLATION INSTRUCTIONS

Dimensions



INSTALLER'S INSTALLATION INSTRUCTIONS

RECOMMENDED PIPING - BASIC INSTALLATION



Rinnai Recommended Equipment List	QTY
Integrity Water Heaters	1
MCC-45 Controller	1

Key

- 3/4" Ball Valve
- 3/4" Union
- Check Valve
- Pressure Bypass Valve
- Pressure Relief Valve
- Circulating Pump
- Solenoid Valve

This drawing is intended only as a guide. It does not imply compliance with local building codes. Installation must be done in accordance with local building codes and may vary depending on installation location. Confer with local building officials before installation.

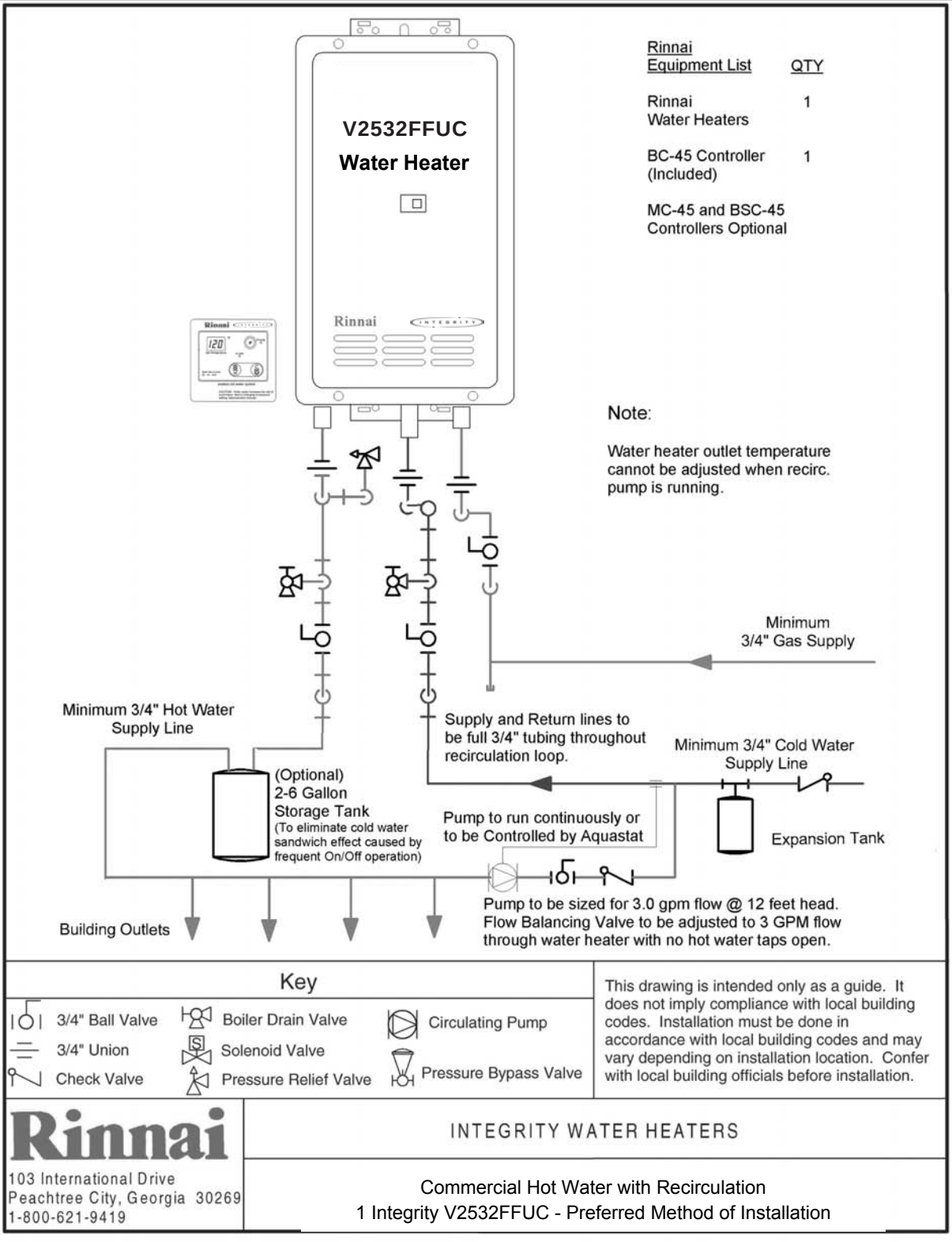
Rinnai
103 International Drive
Peachtree City Georgia 30269
1-800-621-9419

INTEGRITY WATER HEATERS

Commercial Hot Water
1 Integrity V2532FFUC - Preferred Method of Installation

INSTALLER'S INSTALLATION INSTRUCTIONS

RECOMMENDED PIPING - CIRCULATION SYSTEMS



INSTALLER'S INSTALLATION INSTRUCTIONS

Venting

The maximum allowable "Equivalent Length (D)" of vent pipe for the V2532C water heater is 41 feet with 3 bends (as determined using the formula below). If "D" is greater than 41, the vent/air intake piping is too long or there are too many elbows, redesign the vent pipe run.

$D = L + (B_{90} \times 6) + (B_{45} \times 1.5)$

D = Total Equivalent Length of vent system.
L = Length of vent/air intake in feet.
B_{90} = Number of 90° elbows.
B_{45} = Number of 45° elbows.

To help prevent condensation in the vent/air intake piping, the combustion fan has two dip switch settings. Dip switch number 1 is shipped from the factory set to the "OFF" position; this is suitable for the maximum vent/air intake length.

Depending upon the vent/air intake length, Dip switch No. 1 may need to be adjusted to compensate fan speed. Read the following instructions, to determine which position this switch should be placed in.

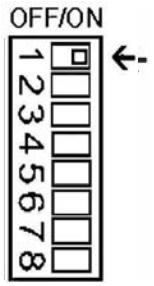
When the Equivalent Length of vent pipe, D, is more than 22 feet, leave dip switch number 1 in the "OFF" position.

When the Equivalent Length of vent pipe, D, is 22 feet or less, dip switch number 1 must be moved to the "ON" position.

Dip switch # 1 is located in the top row of dip switches, 1 through 8 on the PC board. See the diagram below to identify the proper switch. If you do not understand the following information, contact Rinnai at 1-(800)621-9419 for assistance.

Do not alter dip switch number 1 before using formula, to determine the proper setting.
Example #1:
You have 6 feet of vent pipe, and two 90° elbows.
D = 6 + (2 x 6) + (0 x 1.5)
D = 18 Dip switch number 1 should be "ON"

Example #2:
You have 15 foot of vent pipe, one 90° elbow and two 45° elbows.
D = 15 + (1 x 6) + (2 x 1.5)
D = 24 Dip switch number 1 should be "OFF"



Vent/air intake piping length

Warning: All other dip switches with the exception of dip switch No.1, shown in the diagram below, **MUST NOT** be altered. Unauthorized adjustments can cause property damage, personal injury, scalding, or death.

Vent/Air Intake for Continuum V2532C Hot Water Systems

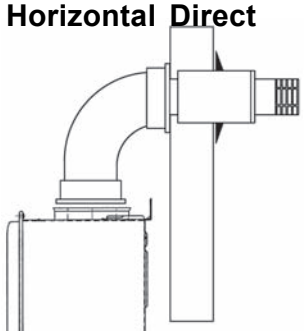
The only vent/air intake systems approved for use with this appliance by CSA are the Rinnai/Ubbink vent system or the Heatfab Saf-T Vent SC vent system. The vent system must vent directly to the outside of a building and use outside air for combustion as indicated in the diagrams below. The minimum and maximum wall thickness for sidewall venting are: Minimum = 4" and Maximum = 20".

Horizontal Direct Vent Installation

The Continuum V2532C may be installed on the internal surface of an external wall using a standard vent system kit. A typical installation is shown in the diagram to the right. The standard vent system kit consists of:

- One vent termination kit
- One discharge adaptor

Horizontal Direct

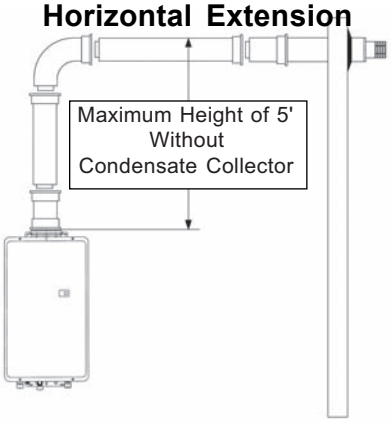


Horizontal Extension Installation

The Continuum V2532C may also be installed on an internal wall which is near to an external wall. This can be done using a combination of extension tube(s), 90° or 45° elbow(s).

The maximum "EQUIVALENT LENGTH" of the vent/air intake system is 41 feet, with a maximum of 3 bends, as calculated using the formula on page 29 (i.e. an installation with 23 feet of extension tubes, and three 90° elbows). The maximum vertical height of the vent/air intake system shall not exceed 5 feet unless an approved condensation collar is used.

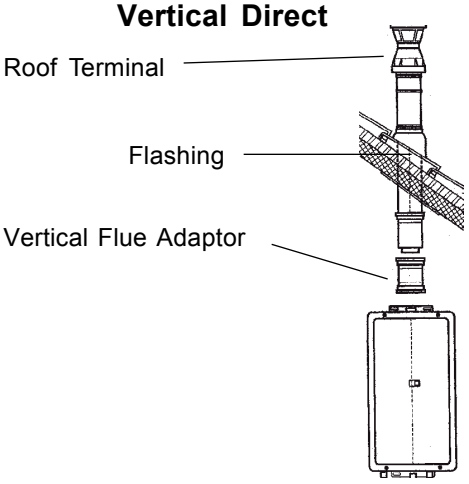
Horizontal Extension



Vertical Direct Vent Installation

The Continuum V2532C can also be installed in roof spaces or areas where vertical venting is required. Venting vertically can be acheived using a combination of extension tube(s), a vertical flue adaptor, a roof terminal, and flashing. The maximum "EQUIVALENT LENGTH" of the vent/air intake system is 41 feet, with a maximum of 3 bends, as calculated using the formula on page 29. However, the maximum HEIGHT of the vent system is limited to 21 feet. The maximum vertical height of the vent/air intake system shall not exceed 5 feet unless an approved condensation collar is used.

Vertical Direct



INSTALLER'S INSTALLATION INSTRUCTIONS

Gas Pipe Sizing Charts

Capacity Table for Natural Gas
cubic feet / hour
(table assumes .3 inch pressure drop, specific gravity of .60)

Nominal Iron Pipe Size Inches	Length of Pipe in Feet													
	10	20	30	40	50	60	70	80	90	100	125	150	175	200
3/4	278	190	152	130	115	105	96	90	84	79	72	64	59	55
1	520	350	285	245	215	195	180	170	160	150	130	120	110	100
1-1/4	1050	730	590	500	440	400	370	350	320	305	275	250	225	210
1-1/2	1600	1100	890	760	670	610	560	530	490	460	410	380	350	320

After determining the length of pipe required select the pipe size that will supply the cubic feet per hour of gas required for the input rating of the Integrity V2532C.
The formula for figuring the cubic feet per hour required is:

$$CFH = \frac{\text{Gas Input of Integrity V2532C(BTU/HR)}}{\text{Heating Value of Gas(BTU/FT}^3\text{)}}$$

*Gas input requirement is on the water heater data plate
*The heating value of the gas can be obtained from the local Natural Gas Utility

Capacity Table for LP Gas
BTUH of undiluted liquified petroleum gases
(table assumes 11 inches of water column pressure at the inlet, .5 inch drop)

Nominal Iron Pipe Size Inches	Length of Pipe in Feet											
	10	20	30	40	50	60	70	80	90	100	125	150
1/2	275	189	152	129								
3/4	567	393	315	267	237	217	196	185	173	162	146	
1	1071	732	590	504	448	409	378	346	322	307	275	252
1-1/4	2205	1496	1212	1039	913	834	771	724	677	630	567	511

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INSTALLER'S INSTALLATION INSTRUCTIONS
Gas Piping Notes

1) A manual gas control valve must be placed upon the gas inlet connection to the Integrity V2532C before it is connected to the gas line. A union can be used on the connection of the Integrity for the future servicing or disconnection of the unit.

2) Check the type of gas and the gas inlet pressure before connecting the Integrity V2532C. If the Integrity V2532C is not of the gas type that the building is supplied with, DO NOT connect the water heater. Contact the dealer for the proper unit to match the gas type.

3) Minimum and Maximum Gas pressures are listed below:
* Minimum value is for input adjustment

Natural Gas:	Minimum 7" WC Maximum 10.5" WC	**Propane Gas:**	Minimum 10"WC Maximum 13.5" WC

WARNING: Conversion of this unit from natural gas to propane or propane to natural gas CANNOT be done in the field.

4) After completion of gas pipe connections, all joints including the heater must be checked for gas-tightness by means of leak detector solution, soap and water, or an equivalent nonflammable solution, as applicable. **Caution:** Since some leak test solutions, including soap and water, may cause corrosion or stress cracking, the piping must be rinsed with water after testing, unless it has been determined that the leak solution is non-corrosive.

5) The Integrity V2532C must be leak tested before it is placed into operation.

6) The Integrity V2532C and its individual shut-off valve must be disconnected from the gas supply piping system when pressure testing of the gas supply piping system at test pressures equal to or greater than 1/2 psi.

7) Always use approved connectors to connect the unit to the gas line. Always purge the gas line of any debris before connection to the water heater.

8) The Integrity V2532C must be isolated from the gas supply piping system by closing it's individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures less than 1/2 psi.

9) The Integrity V2532C's Installation location must provide adequate Combustion and Ventilation airflow.

INSTALLER'S INSTALLATION INSTRUCTIONS
Water Piping Notes

1) A manual water control valve must be placed upon the water inlet connection to the Integrity V2532C before it is connected to the water line. Unions may be used on both the hot/cold water supply lines, for the future servicing or disconnection of the unit.

2) All soldering materials and piping must be compatible with potable water.

3) Purge the water line to remove from it all debris and air. Debris will damage the Integrity V2532C.

4) There is a wire mesh strainer on the Integrity V2532C's inlet to discourage the introduction of debris to the unit. It will need to be cleaned periodically. **DO NOT** operate unit without filter in place.

WARNING: DO NOT reverse the inlet and outlet (cold and hot water) connections on the unit. This would cause the Integrity V2532C to operate dangerously or not at all.

INSTALLER'S INSTALLATION INSTRUCTIONS
Pressure Relief Valve

1) ANSI code calls for the addition of an approved pressure relief valve to all water heating systems.

2) The pressure relief valve must meet the following criteria: The relief valve must comply with the standard for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems ANSI Z21. 22 and/or the standard CAN1-4.4 *Temperature, Pressure, Temperature and Pressure Relief Valves and Vacuum Relief Valves*. This relief valve must be rated at 150 PSI of pressure.

3) The relief valve should be added to the hot water outlet line per manufacturer's instructions. DO NOT place any other type valve or shut off device between the relief valve and the hot water heater.

4) The discharge from the pressure relief valve should be piped to the ground or into a drain system to prevent exposure or possible burn hazards to humans or other plant or animal life. Water discharged from the relief valve could cause severe burns instantly, scalds and/or death.

5) Do not plug the relief valve and do not install any reducing fittings or other restrictions in the relief line. The relief line should allow for complete drainage of the valve and the line.

6) If a relief valve discharges periodically, this may be due to thermal expansion in a closed water supply system. Contact the water supplier or local plumbing inspector on how to correct this situation. Do not plug the relief valve.

7) Pressure relief valve must be manually operated once a year to check for correct operation. Caution: See Item 4 before manually operating relief valve.

8) Should overheating occur or the gas supply fail to shut off, turn off the manual gas valve on the Integrity V2532C.

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INSTALLER'S INSTALLATION INSTRUCTIONS
Electrical Connection Notes

WARNING: The Integrity V2532C must be electrically grounded in accordance with local codes or in the absence of local codes with the most recent edition of the National Electrical Code, ANSI/NFPA 70. In Canada, all electrical wiring to the Integrity V2532C should be in accordance with local codes and the Canadian Electrical Code, CSA C22.1 Part1. Do not rely on the gas or water piping to ground the metal parts of the water heater.

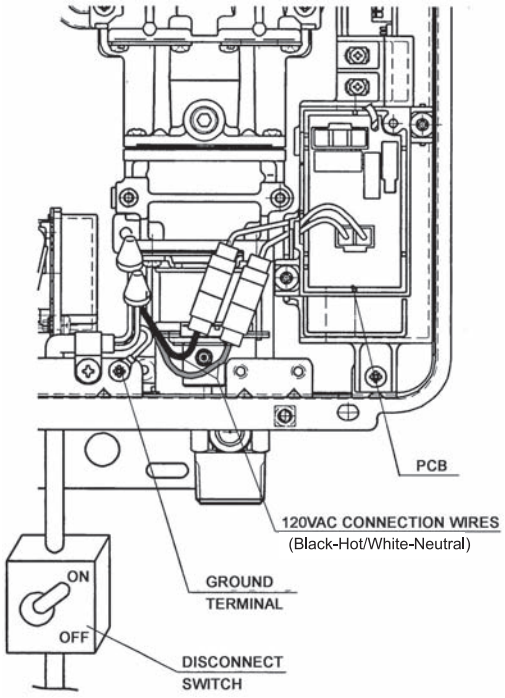
CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify correct operation after servicing.

1 The Integrity V2532C requires 120VAC/ 60 HZ. Power from a properly grounded circuit, GFI.

2 An on/off switch must be provided and installed for the incoming 120VAC power.

3 Wire the Integrity V2532C exactly as shown in the wiring diagram on the next page and on the inside of the cover panel. The black wire is the hot leg wire; the white wire is the neutral wire.

4 A green screw is provided in the junction box for the grounding connection.



Your disconnect switch should be a type that is suitable for outdoor use. Check National Electrical Codes for proper type switch to use in your area.

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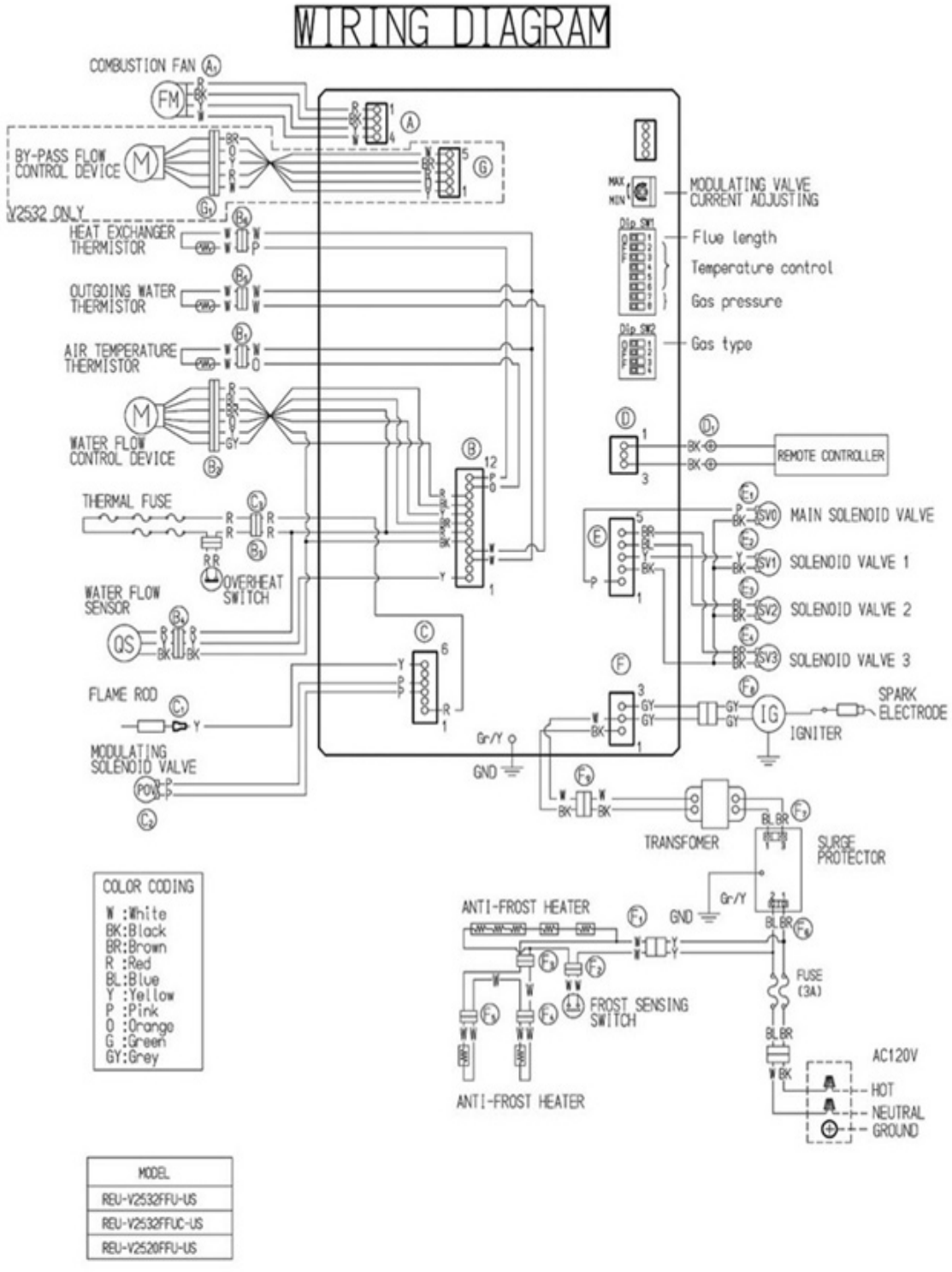
INSTALLER'S INSTALLATION INSTRUCTIONS

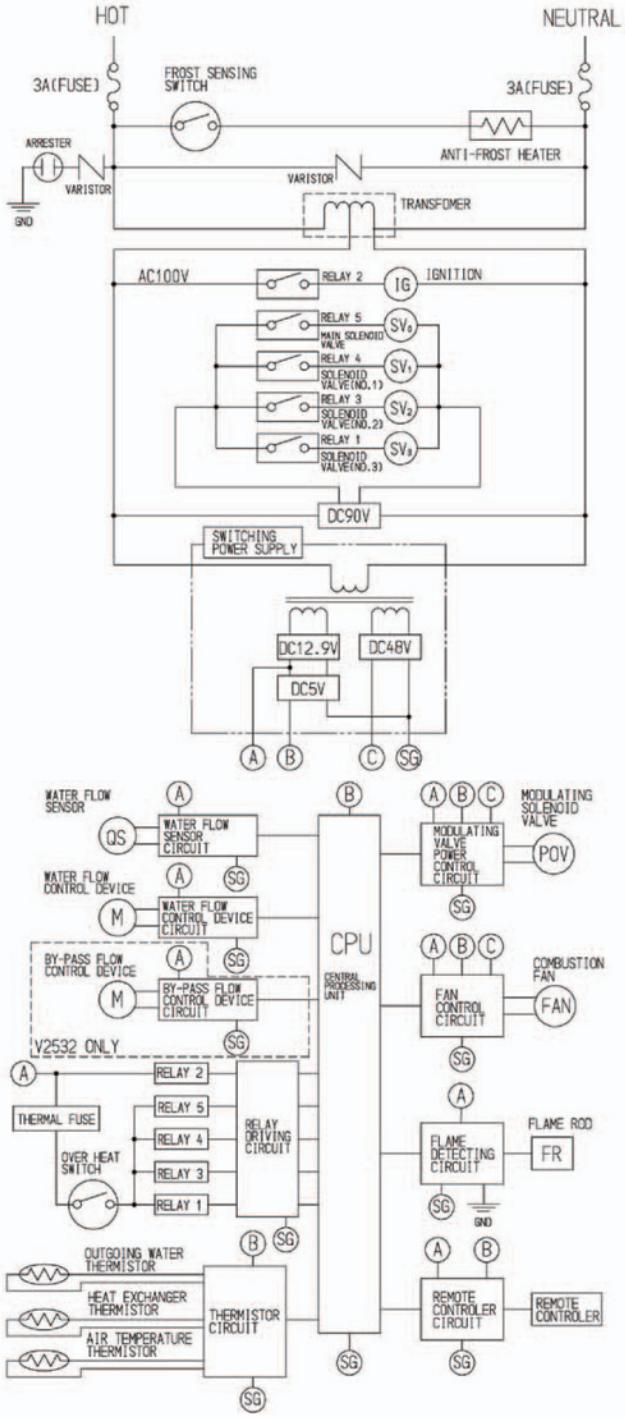
Wiring Diagram



MODEL
REU-V2532FFU-US
REU-V2532FFUC-US
REU-V2520FFU-US

INSTALLER'S INSTALLATION INSTRUCTIONS

Wiring Diagram



INSTALLER'S INSTALLATION INSTRUCTIONS

Lighting the Unit

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

1) This water heater does not have a pilot. It is equipped with a direct ignition device which automatically lights the burner. DO NOT TRY TO LIGHT THE BURNER BY HAND.

2) Before operating the Integrity V2532C smell all around the unit for gas. Be sure to smell near the ground as leaking gas may settle there.

3) Turn the manual gas control valve on.

STOP!! READ THE SAFETY ISSUES ON PAGES 8

4) Turn on any hot water tap. The Integrity V2532C should light and begin heating your water.

If the Integrity V2532C fails to light

1) DO NOT ATTEMPT TO LIGHT BY HAND.

2) Turn off the electrical power to the unit.

3) Turn off the manual gas control.

4) Wait 5 minutes, if you smell gas, go to a neighbor's house and call the gas company or the fire department. If you do not smell gas, go to the next step.

5) Turn the manual gas control valve on.

6) Turn the electrical power to the unit on.

7) Turn on any hot water tap.

8) If the unit still fails to light, turn off the electricity and gas to the unit and call Rinnai 1-800-621-9419.

INSTALLER'S INSTALLATION INSTRUCTIONS

Remote Control- General

The remote control for the Integrity V2532C allows the customer to control the functions of the water heater and to diagnose certain fault conditions.

The Main Controller model MCC-45-4US is intended to be installed in the kitchen or laundry area where the majority of the hot water is being used.

NOTE: The MCC-45-4US has a temperature setpoint range of 96-180°F.Other setpoint tempertures must be set through dip switch settings, Contact Rinnai at 800-621-9419 for dip switch settings.

Before installing the remote control, determine the most convenient location. When deciding on the best location for the remote control, please consider the following items:

1) Place the controller out of reach of small children or unauthorised users.
2) Avoid locations where the controller will become hot. (over a stove, near an oven or a radiant heater.
3) Avoid direct sunlight. (The digital monitor can be difficult to read in direct sunlight)
4) Avoid areas where the remote can be splashed with cooking water, oil or sauce.
5) The remote control cable carries low voltage, 12VDC digital.

NOTE: Only one of controller can be connected to one Integrity V2532C water heater.

(i.e. Installations with two controllers will not function properly.)

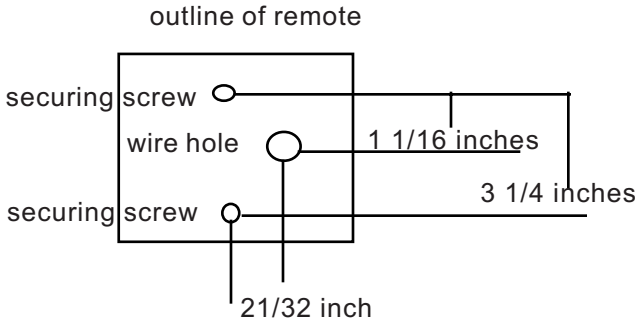
INSTALLER'S INSTALLATION INSTRUCTIONS

Remote Control - Installation

1) Determine a suitable location for the control.

2) Make three holes on the wall as shown.

3) Run the cable between the control and the Integrity V2532C or the control and the other control.



4) Remove the face plate from the remote control, using a screw driver.

5) Connect the cable to the remote control.

6) Mount the control to the wall using the holes drilled in step 2.

Note: If the cable cannot be run in the wall cavity, the plastic knockout should be removed from the top or bottom of the control to allow flush mounting with the wall

7) Disconnect the power from the Integrity V2532C.

8) Remove the cover of the Integrity V2532C.

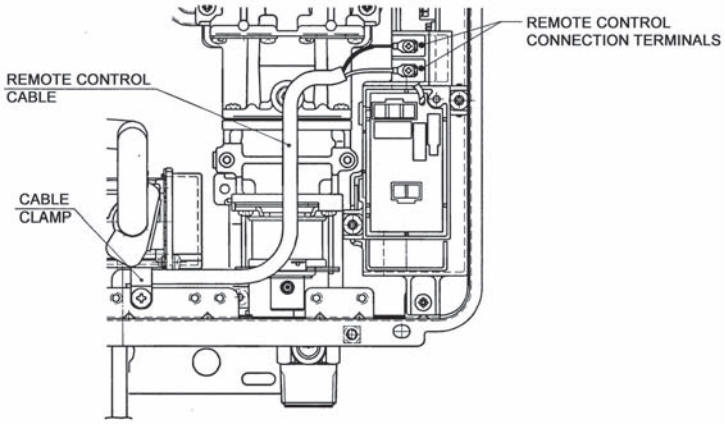
9) Remove the plastic cover from the PCB and electrical connections.

DO NOT ATTEMPT TO CONNECT THE REMOTE CONTROLS WITH THE POWER ON, THERE'S 120 VOLT POTENTIAL, NEXT TO THE REMOTE CONTROL CONNECTIONS INSIDE THE UNIT. All service and wiring should be performed by a certified installer.

10) Thread the cable through the access hole at the base of the unit and connect the wires to the control terminals on the right hand side bottom of the PCB.

11) Secure the control cable using the clamp provided.

12) Replace plastic cover over PCB and then replace the cover of the Integrity V2532C.



INSTALLER'S INSTALLATION INSTRUCTIONS
Testing

1) Turn on the gas and water.

2) Check for water and gas leaks. Use soapy water to test for gas leaks.

3) Remove pressure test point screw, attach pressure gauge to test point.

4) Turn Power on.

5) Open any hot water tap fully.

6) Check test point or supply pressure in water columns per inch.

Manifold Pressure:			Supply pressure:	
Natural Gas	3.7" Hi. fire	0.77" Lo. fire	Natural Gas	Min. 7" Max. 10.5"
LPG	4.2" Hi. fire	0.93" Lo. fire	LPG	Min. 10" Max. 13.5"

NOTE: The pressure may be low due to too little flow, too high an incoming temperature, and/or undersized gas piping. Examine these areas before determining that the pressure needs to be adjusted. **Contact Rinnai before adjusting manifold pressures at 1-800-621-9419. Failure to contact Rinnai, could void unit's warranty.**

7) If it is determined that the gas pressure needs adjusting, first check the in coming pressure at the test point on the gas inlet. If it is correct follow the adjusting procedure contained in the pouch of the unit EXACTLY. If in doubt call Rinnai 1-800-621-9419.

The regulator is pre-set at the factory, it should not need resetting.

8) Turn the hot water off. Turn the power off. Remove the pressure guage and replace the test point screw. Check for a gas leak around the test point screw.

9) Replace the front cover.

10) Turn the power back on.

11) Check the operation of the unit. Check the operation of each of the remote controls. Check the operation of the Power failure protection system.

12) Explain the proper operation of the Integrity V2532C to the customer.

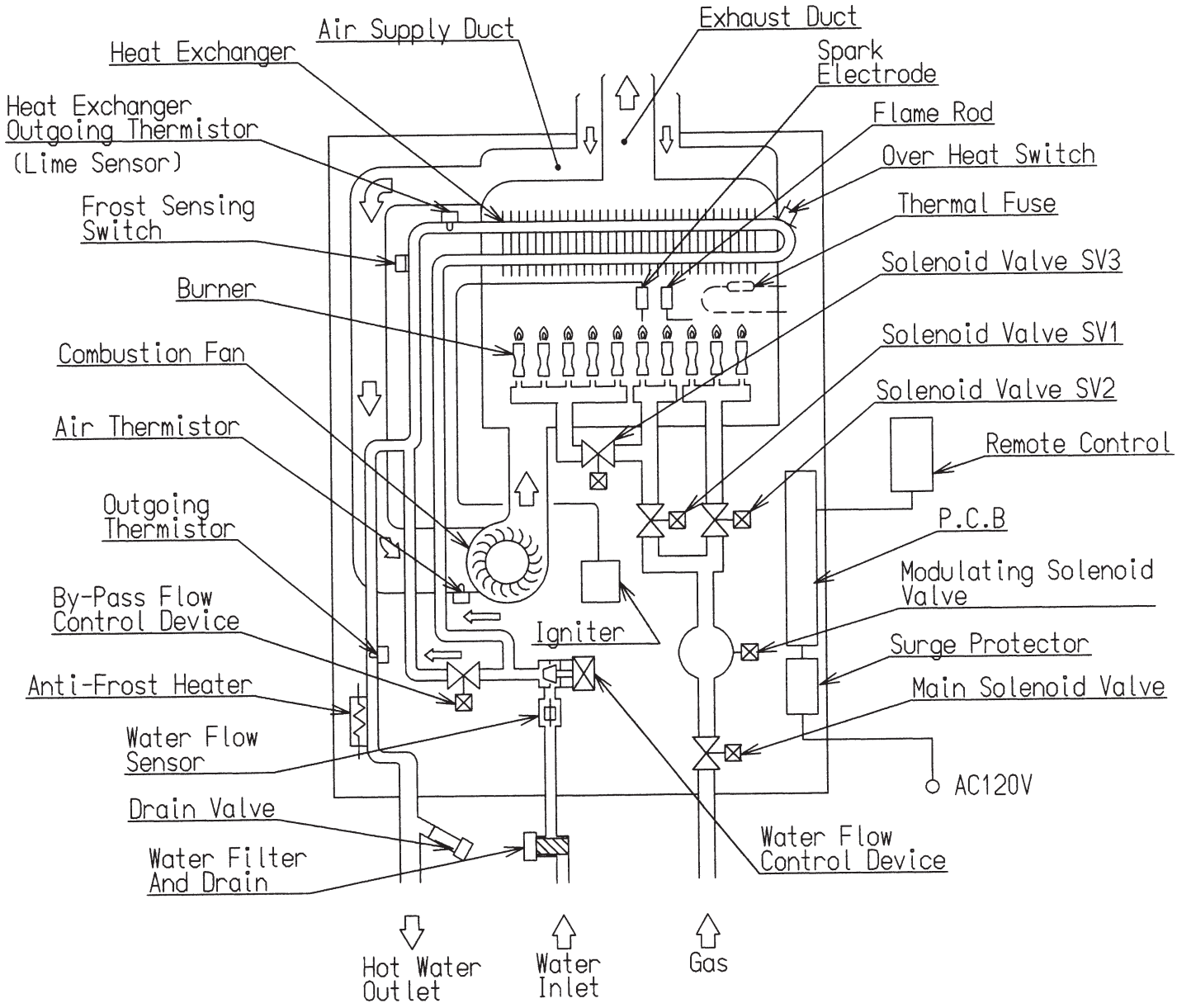
INSTALLER'S INSTALLATION INSTRUCTIONS

Diagnostic Points

Component	Measurement Point		Normal Value	Notes
	Comp. No.	Wire Color		
Surge Protector	F_7	Blue - Brown	AC 108 - 132 V	
Water Flow Control Device	B_2	Red-Blue	DC 11 - 13 V	Power Supplied to Unit
		Gray-Orange	± DC 11 - 13 V	Power Supplied to Unit
		Gray-Yellow	Below DC 1 V (Limiter On)	Full Open Position
			DC 4 - 6 V (Limiter Off)	
		Gray-Brown	Below DC 1 V (Limiter On)	Full Close Position
			DC 4 - 6 V (Limiter Off)	
By-pass Flow Control Device	G_1	Brown-White Orange-White Yellow-White Red-White Gnd	DC 2 - 6 V	Unit In Operating Mode
			15 - 35 Ω	
Remote Control	D_1	Black-Black	DC 11 - 13 V	
Water Flow Sensor	B_4	Red - Black	DC 11 - 13 V	On 0.82 gal/min (30 Hz) Over 1800 pulse/min
		Yellow - Black Gnd	DC 4 - 7 V (Pulse 17-460 Hz)	Off 0.6 gal/min (20 Hz) Below 1200 pulse/min
Combustion Fan	A_1	Red-Black	DC 6 - 45 V	
		Yellow-Black	DC 11 - 13 V	
		White-Black Gnd	DC 5 - 10 V (33-400 Hz)	
Flame Rod	C_1	Yellow-Gnd	AC 5 - 150 V	After Ignition
		Yellow-Flame Rod	Over DC 1μA	Flame Condition
Modulating Valve	C_2	Pink-Pink	DC 2 - 15 V 67 - 81 Ω	
Outgoing Thermistor Heat Exchanger Outgoing Thermister	B_5 B_6	White-White	59°F 11.4 - 14.O kΩ 86°F 6.4 - 7.8 kΩ 113°F 3.6 - 4.5 kΩ 140°F 2.2 - 2.7 kΩ 221°F 0.6 - 0.8 kΩ	
Air Thermistor	B_1	White-White		
Thermal Fuse	B_3 C_3	Red-Red	Below 1Ω	
Ignitor	F_8	Gray-Gray	AC 90 - 110 V	
Main Solenoid Valve	E_1	Pink - Black	DC 80 - 100 V 1.7 - 2.1 kΩ	
Solenoid Valve 1	E_2	Yellow - Black	DC 80 - 100 V 1.7 - 2.1 kΩ	
Solenoid Valve 2	E_3	Blue-Black	DC 80 - 100 V 1.7 - 2.1 kΩ	
Solenoid Valve 3	E_4	Brown - Black	DC 80 - 100 V 1.7 - 2.0 kΩ	
TRANSFORMER VOLTAGES AND RESISTANCES				
Primary Windings	F_7	Blue-Brown	51 - 63 Ω	
Secondary Windings	F_9	White-Black	AC 90 - 110 V	

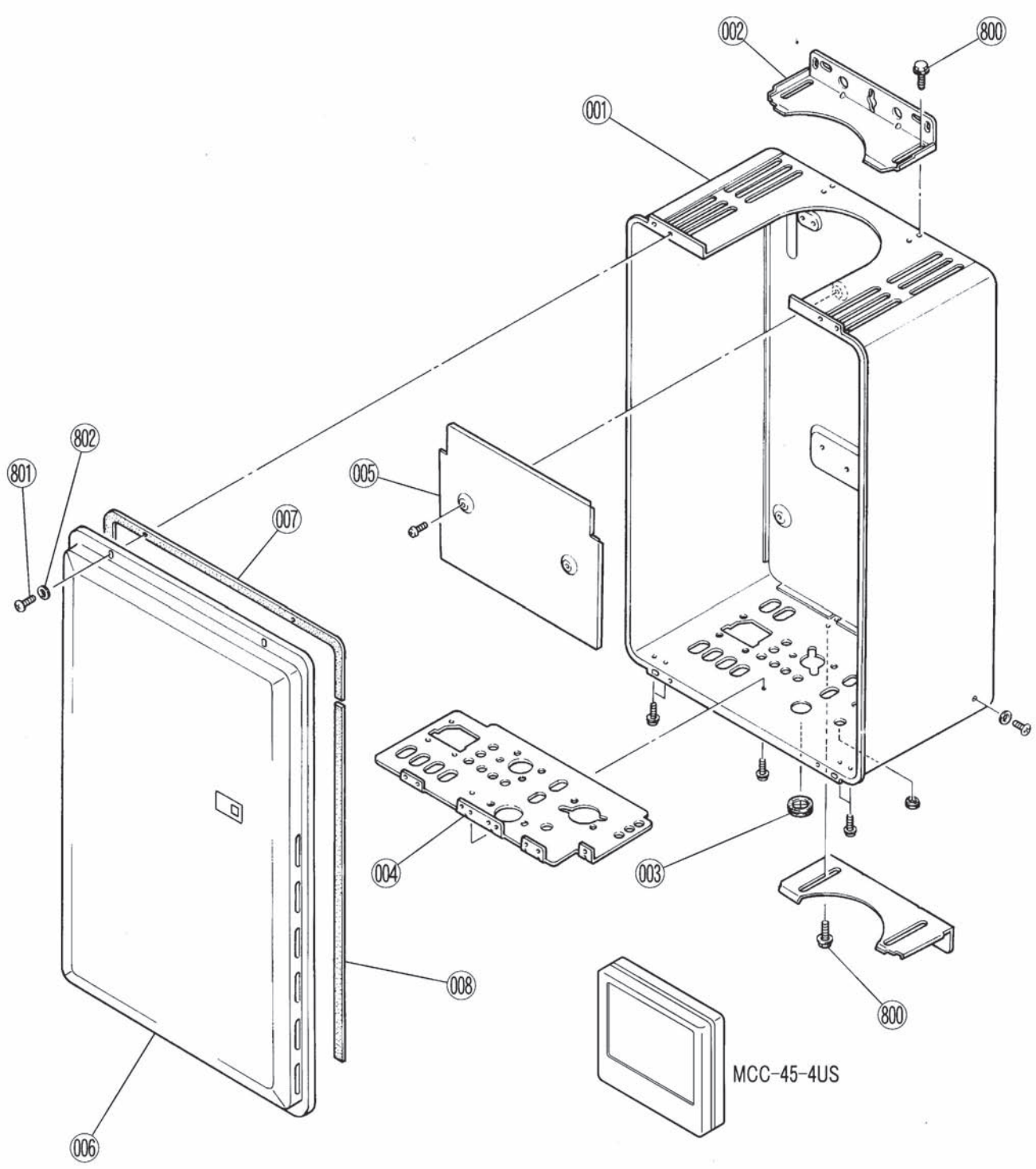
INSTALLER'S INSTALLATION INSTRUCTIONS

Schematic Diagram



INSTALLER'S INSTALLATION INSTRUCTIONS

Exploded View - Cabinet



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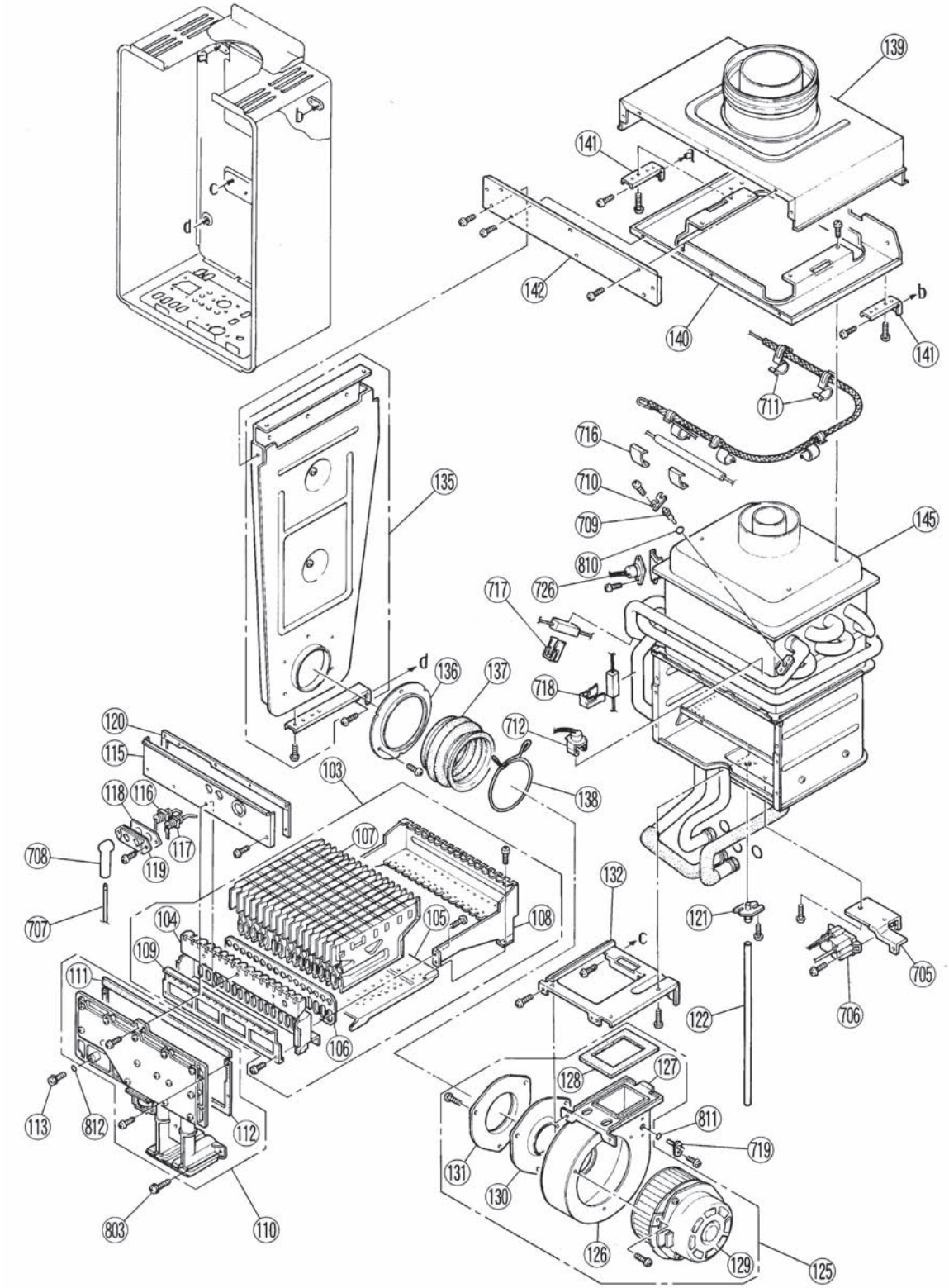
INSTALLER'S INSTALLATION INSTRUCTIONS

Exploded View - Internals



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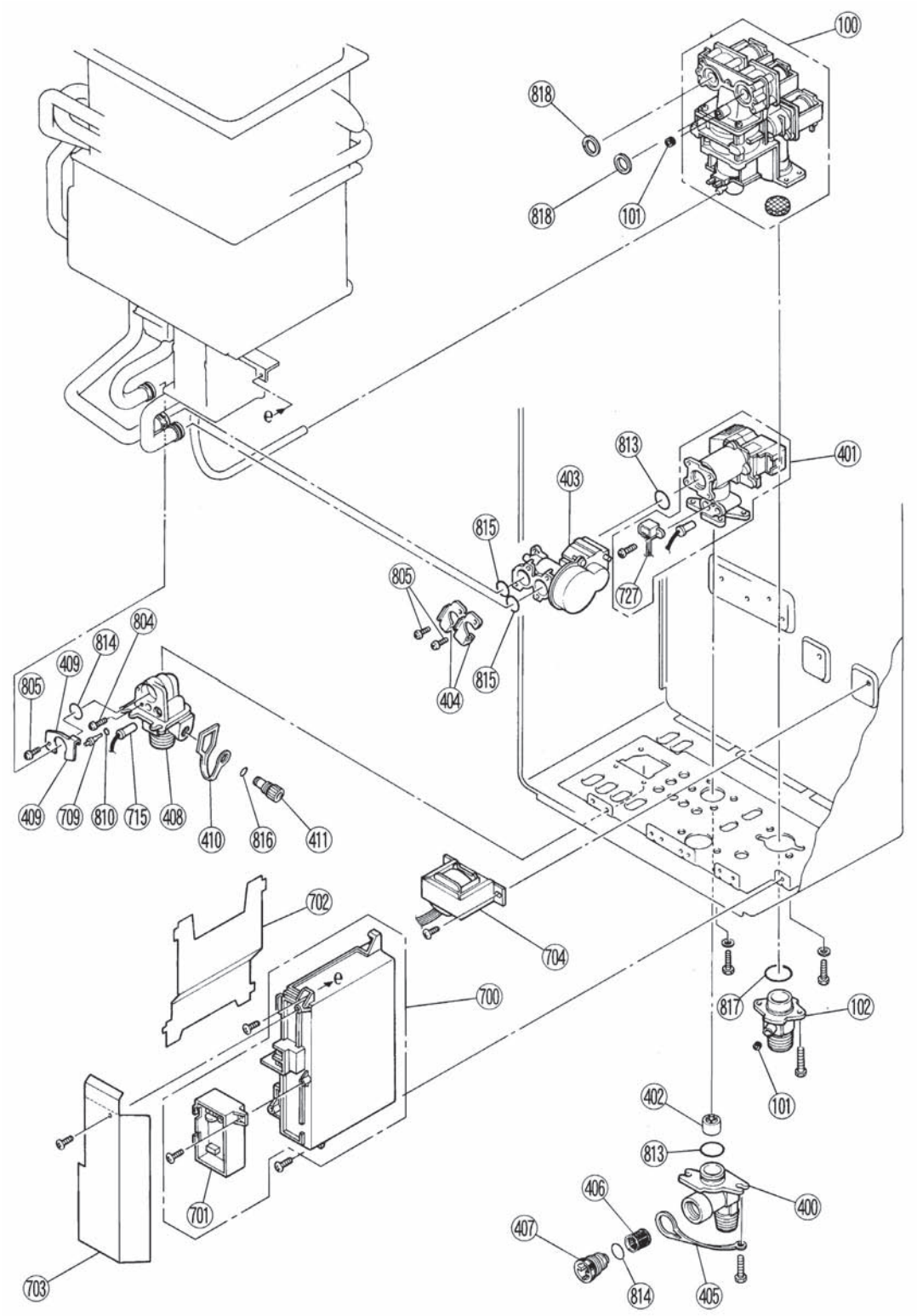
INSTALLER'S INSTALLATION INSTRUCTIONS

Exploded View - Internals



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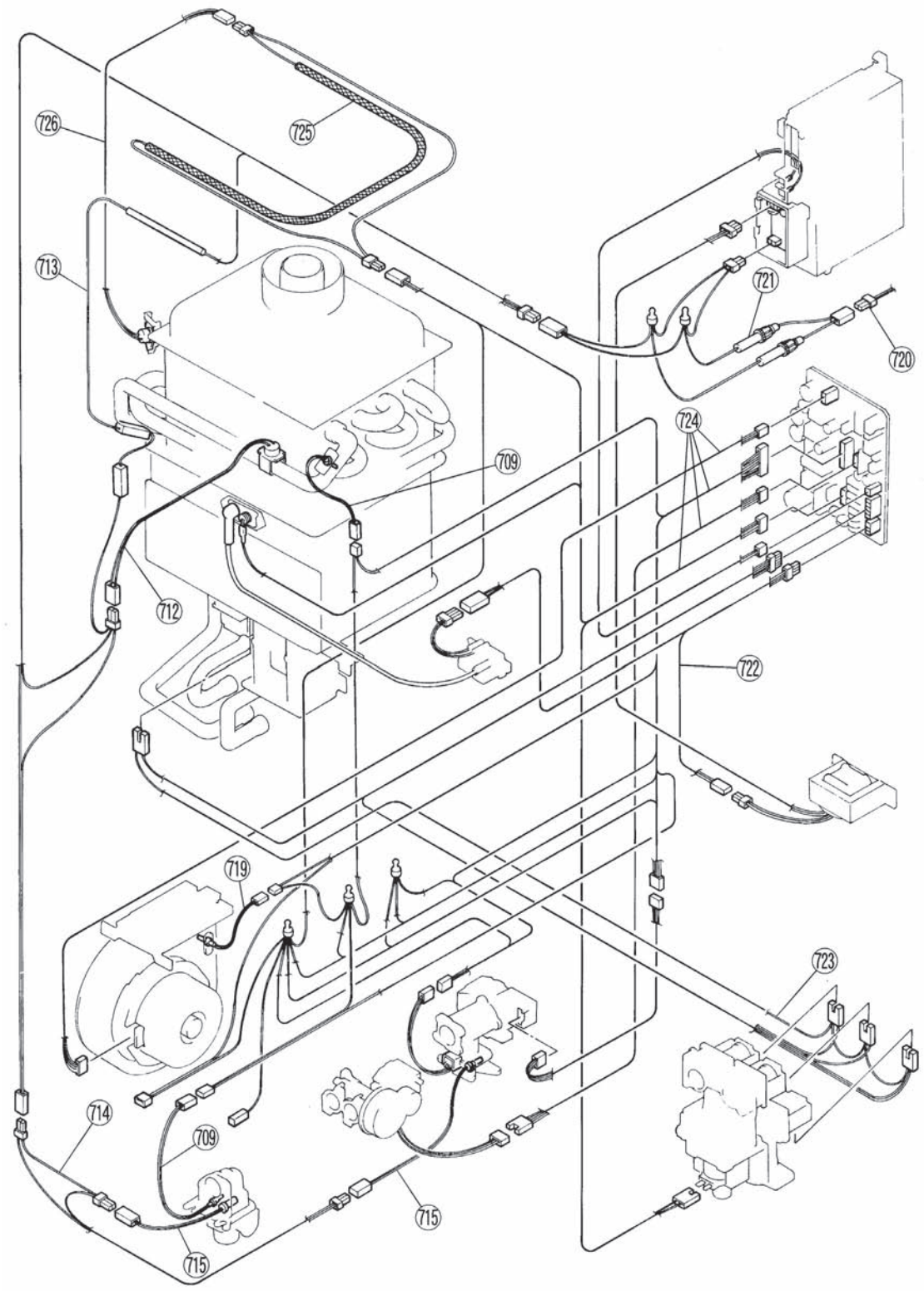
INSTALLER'S INSTALLATION INSTRUCTIONS

Exploded View - Electrical



INSTALLER'S INSTALLATION INSTRUCTIONS

Parts List

Number	Description	Part Number	Quantity
001	Casing Assembly	U245-100-2	1
002	Wall Fitting Bracket-4	U242-111-5	2
003	Rubber Bushing	U245-125	1
004	Connection Reinforcement Panel	U245-120	1
005	Heat Protection Plate	U245-107	1
006	Front Panel	U245-110-2	1
007	Front Panel Packing	BU195-167	1
008	Front Panel Packing Side	AU115-163	2
100	Gas Control Assembly	C36E-41-S	1
101	Screw	AU39-965	2
102	"Gas Connection (3/4"NPT)"	CU195-1866	1
103	Burner Unit Assembly	H73-110	1
104	Burner Case Front	CH51-209	1
105	Burner Case Bottom Panel	H73-112	1
106	Packing	BH51-218	1
107	Lean and Rich Bunsen Burner Assembly	B3A7-1	16
108	Burner Case Back Panel	CH51-221	1
109	Damper	H73-115	1
110	Manifold Assembly -A (LPG)	U245-200-A	1
110	Manifold Assembly -B (Nat. G)	U245-200-B	1
111	Packing of Combustion Chamber	AU155-207-2	1
112	Lower Packing of Combustion Chamber	H73-214	1
113	Screw	C10D-5	1

INSTALLER'S INSTALLATION INSTRUCTIONS

Parts List

Number	Description	Part Number	Quantity
115	Combustion Chamber Front Plate	U245-261	1
116	Electrode	H73-120	1
117	Flame Rod	AH41-216	1
118	Electrode Packing	AH66-398	1
119	Electrode Holder	AH66-393	1
120	Upper Packing of Combustion Chamber	U245-262	1
121	Tube Joint	U242-312	1
122	Pressure Tube	AU161-665-C	1
125	Blower Motor All Assembly	U245-550	1
126	Fan casing Assembly	U245-555	1
127	Fan Connecting Bracket	BH29-606	1
128	Fan Connecting Packing	AU183-562	1
129	Blower Motor	U245-560	1
130	Bell Mouth	U245-558	1
131	Bellows Connecting Bracket/Intake Duct	U245-566	1
132	Combustion Chamber Bracket	U245-255	1
135	Air Inlet Box Assembly	U245-400	1
136	Bellows Connecting Bracket/Fan	U245-408	1
137	Bellows	U245-409	1
138	Bellows Clamping Ring	U245-567	1
139	Air Inlet Box Assembly	U245-410	1
140	Exhaust Bracket	U245-434	1
141	Exhaust Bracket Holder	U245-435	2

INSTALLER'S INSTALLATION INSTRUCTIONS

Parts List

Number	Description	Part Number	Quantity
142	Air Inlet Box Cover	U245-419	1
145	Heat Exchanger Complete Assembly	U245-690-C	1
400	"Water Inlet (3/4"NPT)"	H73-501-2	1
401	Water Flow Servo & Sensor Assembly	M8E-6-5	1
402	Rectifier	M8D1-15	1
403	By-pass Servo Assembly	M6J-1-3	1
404	Stop Bracket	AH69-310	2
405	Plug Band	H73-512	1
406	Water Filter Assembly	H73-511	1
407	Filter Plug	H73-510	1
408	"Hot Water Outlet (3/4"NPT)"	U245-865-3	1
409	Stop Bracket	AU162-1876	1
410	Plug Band Small	AU103-413	1
411	Drain Valve	AU142-444	1
700	PCB	U245-500	1
701	Surge Protector	BBF9-630	1
702	PCB Cover-Side	U245-774	1
703	PCB Cover-Front	BU168-707	1
704	Transformer Assembly	ET-281	1
705	PCB Bracket	U245-257	1
706	Ignitor	EI-189	1
707	High Tension Cord	BH38-710-240	1
708	Electrode Sleeve	AU206-218	1
709	Thermistor	BH45-650	2

INSTALLER'S INSTALLATION INSTRUCTIONS
Parts List

Number	Description	Part Number	Quantity
710	Thermistor Clip Large	CP-90172	1
711	Thermal Fuse Clip	U217-676	5
712	Frost Sensing Switch	U242-511	1
713	120V Anti-Frost Heater Assembly	U245-620	1
714	Heater Connecting Harness	U245-621	1
715	120V Valve Heater Assembly	U245-622	1
716	Anti-Frost Heater Clip	CF29-742	2
717	Anti-Frost Heater Clip A	AU111-653	1
718	Anti-Frost Heater Clip	AU100-721	1
719	Inlet Air Thermistor	BH50-730-2	1
720	Power Supply Harness	AU195-1876	1
721	Fuse Harness	BU195-1630	1
722	100V Harness	U245-601	1
723	Solenoid Valve Harness	U245-602	1
724	Sensor Harness	U245-603	1
725	Thermal Fuse Harness	U245-610	1
726	Mold-Type Over Heat Switch	BU129-824-2	1
800	Screw	ZIHD0510UK	8
801	Screw	ZAD0408UK	4
802	Washer	AU33-184	4
803	Screw	CP-21478-412	3
804	Screw	U217-449	1
805	Screw	ZAA0408UK	3
810	O-ring	M10B-2-4	2

INSTALLER'S INSTALLATION INSTRUCTIONS

Parts List

Number	Description	Part Number	Quantity
811	O-ring	M10B-2-3	1
812	O-ring	M10B-13-4	1
813	O-ring	M10B-2-18	2
814	O-ring	M10B-2-16	2
815	O-ring	M10B-2-14	2
816	O-ring	M10B-2-7	1
817	O-ring	M10B-1-24	1
818	Packing	C36E1-6	2
888	V2532FFUC Owner's Manual	U245-661	1
-	Package Spec Sheet	PWB-261	1
-	"Manual 3/4" gas control valve"	BU195-1865	1
-	Commercial remote control kit	MCC-45-4US	1
-	Horizontal Discharge Adapter	50710327	-
-	Wall Discharge Terminal (for wall thicknesses from 4" to 20")	50223098B	-
-	Vertical Discharge Adapter	224064	-
-	Roof Discharge Terminal	184118	-
-	Condensate Collector	224069	-
-	Roof Flashing - Flat Roof	146141	-
-	Roof Flashing - 1/12 to 6/12 Pitch	50171948	-
-	Roof Flashing - 6/12 to 12/12 Pitch	50171960	-
-	Roof Flashing - 12/12 to 16/12 Pitch	50171953	-
-	10" Pipe Extension	224051	-
-	19.5" Pipe Extension	224052	-
-	39" Pipe Extension	224053	-
-	90 Degree Vent Pipe Elbow	224063	-
-	45 Degree Vent Pipe Elbow	224050	-
-	Vent Pipe Clamp	169044	-

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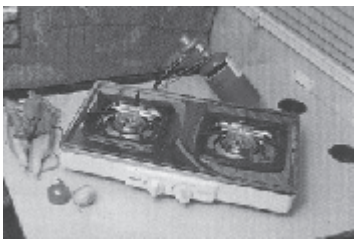

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